FOR QUALITY & EXCELLENCE IN HIGHER EDUCATION
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BANGALORE UNIVERSITY
DEPARTMENT OF CIVIL ENGINEERING

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JNANA BHARATHI
BANGALORE - 560 056

BUB/CTE/2014-15

Date: 07-06-2014

1. TEST REPORT ON REINFORCEMENT STEEL:

Sub: Testing of Reinforcement Steel of diameter 10, 12, 16mm **(FE-500), TMT Steel.**
{Project*: Providing CC Roads and Drains at Jumma Masjid Road and Cross Roads, Bellahalli in Ward No.05, Byatrayanapura Sub-Division}

Ref.: Letter No. Testing/BUB/2014-15, dated 03-06-2014

Sample supplied to lab by: Sri. Ninganagowda, Contractor, Bangalore.

Report required for : Assistant Executive Engineer, Byatrayanapura Sub-Division, BBMP, Bangalore

TABLE – 1

SL No	Details	For10 mm		For 12mm		For 16mm	
		Test Results	Min Req. as per IS 1786-2008	**Test Results**	Min Req as per IS 1786-2008	**Test Results**	Min Req as per IS 1786-2008
01	Observed diameter of bar	**10.0mm**	10.0mm	**12.0mm**	12.0mm	**16.0 mm**	16.0 mm
02	Observed Wt/m Length **Kg/m**	**0.622**	0.567	**0.894**	0.834	**1.585**	1.483
03	Proof stress/Yield stress, fy , **N/mm^2**	**552.0**	500.0	**560.0**	500.0	**556.0**	500.0
04	Bend/ Re bend Test	**Ok**	---	**Ok**	---	**Ok**	---
05	Percentage of Elongation, %	**22.40**	12.00	**19.00**	12.00	**21.00**	12.00
06	Ultimate Tensile Strength **N/mm^2**	**612.0**	545.0	**638.0**	545.0	**623.0**	545.0

*As furnished by Client.
The Results relate only to the items tested.

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JNANA BHARATHI
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BUB/CTE/2014-15 **Date: 07-06-2014**

1. TESTING OF FINE AGGREGATES:

Sub: Testing of Fine Aggregates.
{Project*: Providing CC Roads and Drains at Jumma Masjid Road and Cross Roads, Bellahalli in Ward No.05, Byatrayanapura Sub-Division}

Ref.: Letter No. Testing/BUB/2014-15, dated 03-06-2014

Sample supplied to lab by: Sri. Ninganagowda, Contractor, Bangalore.

Report required for : Assistant Executive Engineer, Byatrayanapura Sub-Division, BBMP, Bangalore

TABLE - 1.1 : SIEVE ANALYSIS :

IS Sieve Size, mm	**Percentage Passing**	Specification as Per IS: 383-1970(Reaffirmed 2002) **Percentage Passing**			Remarks
		Zone-I	**Zone-II**	**Zone -III**	
04.75	97.20	90-100	90-100	90-100	The Sample Conforms to Grading **Zone-II**
02.36	84.00	60-95	75-100	85-100	
01.18	72.30	30-70	55-90	75-100	
600. mic	45.00	15-34	35-59	60-79	
300.mic	18.20	5-20	8-30	12-40	
150.mic	3.00	0-10	0-10	0-10	

TABLE 1.2 ;

Sl No	Test Conducted	Sample	Results	Requirements as Per IS. Specification IS :383-1970 (Reaffirmed 2002)
1	Silt Content	001	1.44%	Not more than 8%
2.	Specific Gravity	----	2.56	-------

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JNANA BHARATHI
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BUB/CTE/2014-15 **Date: 12-06-2014**

1. TEST REPORT ON CEMENT:

Sub: Testing of 53 Grade Cement Sample (IS 12269-1987).
{Project*: Providing CC Roads and Drains at Jumma Masjid Road and Cross Roads, Bellahalli in Ward No.05, Byatrayanapura Sub-Division}

Ref.: Letter No. Testing/BUB/2014-15, dated 03-06-2014

Sample supplied to lab by: Sri. Ninganagowda, Contractor, Bangalore.

Report required for : Assistant Executive Engineer, Byatrayanapura Sub-Division, BBMP, Bangalore

PHYSICAL TESTS ON CEMENT

Brand* : Birla Super
Grade * : 53
Type * : OPC
Date : 04-06-2014 to 11-06-2014

SL No	Name of Test	Results	Requirements as per
		Cement Sample	IS 12269-1987
1	Initial setting time	**155 min**	Shall not be less than 30 min
2	Final setting time	**270 min**	Shall not be more than 600 min
3	Fineness (by dry sieving on IS 90 micron sieve)	**2.30%**	Not to exceed 10.0%
4	Soundness test(by Le-Chatelier's method)	**1.70 mm**	Shall not be more than 10 mm
5	Compressive strength e) 3 days (average of three results) f) 7 days (average of three results)	**29.00 N/ Sq mm** **40.10 N/Sq mm**	Shall not be less than 27 N/Sqmm Shall not be less than 37N/Sqmm

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JNANA BHARATHI
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BUB/CTE/2014-15 **Date: 07-06-2014**

1. TESTING OF COARSE AGGREGATES (40 mm):

Sub: Testing of Coarse Aggregates.
{Project*: Providing CC Roads and Drains at Jumma Masjid Road and Cross Roads, Bellahalli in Ward No.05, Byatrayanapura Sub-Division}
Ref.: Letter No. Testing/BUB/2014-15, dated 03-06-2014
Sample supplied to lab by: Sri. Ninganagowda, Contractor, Bangalore.
Report required for : Assistant Executive Engineer, Byatrayanapura Sub-Division, BBMP, Bangalore

Table - 1.1 : SIEVE ANALYSIS :

IS Sieve Size, mm	Percentage passing	Requirements as per IS 383-1970 (Reaffirmed on 2002) % Passing	
	40 mm Sample	*Single size*	*Graded*
40mm	97.00	85-100	95 – 100
20mm	67.20	0 -20	30- 70
10mm	27.00	0 -5	10- 35
4.75mm	Nil	------	0 - 5

TABLE 1 2 :

SL No	Test conducted	Sample No	Results	Requirements as per IS:383-1970 & Test Conforms to IS 2386(Part I to IV) – 1963 (Reaffirmed on 2002)
1.	Flakiness Index	As above	15.90 %	Not to exceed 25 %
2.	Crushing value	----,,----	26.00 %	Not to exceed 45 % for concrete other than for wearing surfaces and 30% for concrete for wearing surfaces

*As Furnished by Client.
The Results relate only to the items tested.

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JNANA BHARATHI
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DATE: 14-07-2014

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (for 28 days Compressive Strength).
{Project*: Providing CC Roads and Drains at Jumma Masjid Road and Cross Roads, Bellahalli in Ward No.05, Byatrayanapura Sub-Division}
Ref.: Letter No. Testing/BUB/2014-15, dated 13-07-2014
Sample supplied to lab by: Sri. Ninganagowda, Contractor, Bangalore.
Report required for : Assistant Executive Engineer, Byatrayanapura Sub-Division, BBMP, Bangalore

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete* : M_{20}

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in Mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	15-06-14	13-07-14	28	22500	510	22.66	**22.66**
	002	"	"	"	"	505	22.44	
	003	"	"	"	"	515	22.88	

*As Furnished by Client.

The Results relate only to the items tested

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